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添付公開書類

国際調査報告書

(54)Title: PROPYLENE/ETHYLENE BLOCK COPOLYMER COMPOSITION FOR EXTERIOR AUTOMOTIVE PART

自動車外装部品用プロピレンーエチレンブロックコポリマー系組成物 (54)発明の名称

## (57) Abstract

A propylene/ethylene block copolymer composition for exterior automotive parts which has undergone granulation wherein the sodium salt of acid methylenebis(2,4-di-t-butylphenol) phosphate is added as a nucleating agent in an amount of 300 to 2,000 ppm and which satisfies the following: (a) the melt flow rate is 10 to 18 g/10 min, (b) the ordinary-temperature xylene-insoluble components have a content regarding stereoregularity index of 98.9 % or higher, (c) the content of ordinary-temperature xylene-soluble components is 22 to 28 wt.%, and the copolymer contains a single T1 relaxation time component and satisfies the relationship y < 0.0014x<sup>3</sup>-0.0897x<sup>2</sup>-1.0593x+231.6 wherein x is the ethylene content (wt.%) and y (msec) is the T1 relaxation time.



The present invention provides a propylene-ethylene block copolymer composition for automobile exterior parts having sufficient stiffness and mechanical strength required for the automobile exterior arts, which is produced at low cost since no additional steps for blending other rubber components are required in the production thereof. The composition contains methylenebis(2,4-di-t-butylphenol) acid sodium phosphate which is blended with the propylene-ethylene block copolymer in an amount of 300 to 2,000 ppm upon granulation thereof, and has (a) a melt flow rate of 10 to 18 g/10 min when measured at 230 °C under a load of 2.16 kg (21.2N); (b) an ordinary temperature xylene insoluble having a stereoregularity index [mmmm] fraction of 98.9% or higher when measured by 13°C-NMR; and (c) an ordinary temperature xylene soluble characterized by: (c-1) having a content of 22 to 28% by weight; (c-2) comprising only a single component with respect to a relaxation time T1 measured by pulse NMR; and (c-3) satisfying the following formula (I):

 $y \leq 0.0014x^3 - 0.0897x^2 - 1.0593x + 231.6 \tag{I}$  wherein x is an ethylene content (% by weight) measured by <sup>13</sup>C-NMR and y is the relaxation time T1 (msec) measured by pulse NMR.

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